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The Desired State of the U.S. Marine Transportation System in 2020

VISION STATEMENT

Task Force members adopted the following vision statement, which was developed at the MTS National Conference:

The U.S. Marine Transportation System will be the world's most technologically advanced, safe, secure, efficient, effective, accessible, globally competitive, dynamic and environmentally responsible system for moving goods and people.

GUIDING PRINCIPLES

The vision summarizes our goal for the MTS in 2020. To realize this vision, the Task Force members also adopted the following set of guiding principles, which were designed at the MTS National Conference, to shape the strategies and actions necessary to achieve the MTS for 2020.

Achieving this vision is the equal responsibility of private, local, State, and national stakeholders.

- Integration of the MTS with domestic and international transportation systems will provide for national security, ensure economic well-being, enhance the quality of life, and ensure environmental protection.
- Clearly defined, coordinated, and consistent Federal leadership is needed to achieve the vision for the MTS.
- Public-private sector partnerships will meet MTS challenges through shared responsibility, accountability, and agreement on funding.
- MTS decisions will be based on full consideration of and harmonization among diverse interests.
- Aggressive, cost-effective technology development and deployment are essential to maintaining long-term competitiveness.
- People — work force, passengers, and other stakeholders — are critical to the successful operation of the MTS, and human factors are essential to its development.

PRINCIPAL COMPONENTS

The MTS is comprised of waterways, ports, their intermodal connections, vessels and vehicles, and system users. Although each is described separately, all are integral components of the MTS that require coordination for the system to operate efficiently and effectively.

Waterways include the navigable waters of the United States and associated infrastructure (e.g., locks, aids to navigation) that are used by vessel traffic. Channel depth and width will be maintained consistent with demand while achieving cost-efficiency and promoting protection and enhancement of environmental quality. Locks, aids to navigation, and other infrastructure will be maintained for efficient and safe operations.

Ports are those marine transportation facilities where vessels transfer cargo and passengers and where vessels are maintained. Ports will be located and sized to ensure convenient and ready access with characteristics that reflect the markets they serve. Port facilities, such as anchorages and piers, will be sized and outfitted for the range of vessels and traffic expected to be using the system in 2020. Shipyards will be capable of meeting system needs, including national security.

Intermodal Connections are linkages required at the land-water boundary to allow the transfer of cargo and passengers between transportation modes. Intermodal connections include pipelines; road and rail access routes; state-of-the-art intermodal cargo-handling equipment; and communication technology. The connections must maximize throughput and minimize transloading times and costs. Shoreside infrastructure planning, investments, and waterfront development will ensure that access to ports and waterways is sufficient to sustain the current and projected traffic and operations of the ports, while ensuring the protection of the environment.

Vessels and Vehicles are the infrastructure that transports goods and people through the system. They will be safely designed and operated, technologically advanced and matched appropriately to their function in order to minimize impacts on the environment.

MTS Users encompass a wide range of individuals and organizations, both near to and far from U.S. waterways and ports. Every American benefits from the MTS, directly or indirectly. Some of the principal users of the MTS include:

- Domestic and international marine carriers;
- Pilots, and operators of tugboats, dredges, and passenger-vessels;
- Terminal, shipyard, and marina operators;
- Truck, rail, and pipeline operators;
- Waterfront employers and labor;
- Manufacturers, distributors and retailers;
- Agricultural, chemical, petroleum, mining and utility companies;
- Vacationers, nature enthusiasts, and recreational users;
- Commercial fishing; and
- U.S. military.

Primary Functions

The U.S. marine transportation system will serve three primary functions in 2020:

- Provide domestic transportation of goods and passengers;
- Act as global gateways to world markets and for military mobilization; and
- Support recreational and commercial uses and local economic development.

Domestic Transportation of Goods and Passengers: The U.S. MTS is an integral component of the entire domestic intermodal transportation system that provides shippers and travelers with a waterborne means of transportation that is modern, fuel-efficient, cost-effective, dependable, safe, and environmentally sound. Market demands will size the capacity of the system, which in turn will foster the economic development of supported regions, particularly those areas that depend on cost-effective transportation.

The domestic waterborne transportation system will be characterized by full integration with international ports and with other transportation modes, and by the use of technology and standards that improve effectiveness and productivity. Surface and vessel transportation, ports, waterways, and intermodal connection capacities will be balanced for optimal efficiency. Industry-supported ITS will optimize traffic management, allowing for the full use of system capacity while minimizing congestion, delays, and costs.

Global Gateways: As gateways to the world, the MTS will operate with modern infrastructure provided by dependable funding sources, using optimal technology. In terms of speed, safety, security, capacity, efficiency, and environmental enhancement, the system will be world class. The system's component capacities will be coordinated through a robust ITS such that inland transportation capacity matches gateway throughput. Consolidated and coordinated government (Federal, State, local) requirements and regulations will streamline the administrative and funding procedures for infrastructure improvements and rapid freight throughput.

Gateway capacity will account for growth, competition, backup capacity, and surge/sustainment requirements for the national defense. The MTS will afford rapid, efficient transportation of military cargo and supplies that support national defense.

Recreational and Other Commercial Activities: The U.S. MTS will support recreational and commercial activities, such as fishing, power generation, and waterfront development that contribute to the Nation's quality of life. The growing volumes of both recreational and commercial traffic may require additional vessel routing measures, as well as other changes in waterway management. The challenge will be to accommodate and integrate the needs of both user groups. The vision is an automated, nonintrusive, more capable traffic management system that more efficiently guides the flow of vessel traffic. Waterfront development planning will consider the needs of all MTS users and stakeholders, along with other land use (for example, residential, commercial, industrial, parklands, and sensitive environmental habitats, plus the need to support a healthy watershed). State and local governments will continue to support MTS activities as part of their local economic development and job-creation activities.

Support Systems

Two sets of systems must be developed and operational to support the envisioned U.S. MTS:

- Intelligent transportation systems and
- Management systems.

Coordination is an essential component of the desired management systems.

Intelligent Transportation Systems (ITS): ITS will be a collection of electronic communication and information systems and networks that provide the means for collecting, storing, retrieving, analyzing, and disseminating the information required by all MTS stakeholders and users. Where appropriate, the MTS ITS will be integrated with the ITS of other transportation modes. Integration will ensure the smooth and efficient movement of freight and passengers within and between modes and maximize use of the system. ITS will ensure dependable and uninterrupted service.

Intelligent transportation systems supporting the MTS will:

- Encourage efficient and safe vessel operations by providing, where deemed necessary by the local port community, dependable communications and real-time, all-weather, reliable information on vessel location, keel clearances, water and channel conditions, other vessel traffic, delays, and hazards.
- Provide electronic and satellite navigation that will improve mobility and enhance waterways safety and may allow for the removal of some physical aids to navigation in the future.
- Facilitate efficient administration of the MTS by providing a single freight/shipper database. Cargo and vessel data entered once will meet all Federal, State, and local information requirements. Consolidation will allow these carriers, shippers, and Federal, State, and local agencies to coordinate regulatory actions, eliminate redundancies, and increase administrative efficiencies. In conjunction with the ITS of other transportation modes, the MTS ITS will provide total in-transit visibility of cargo and passengers.
- Promote informed decision making by all stakeholders and system users concerning mode, route, and schedule choices; maintenance, repair, construction, and operating schedules; and research and development, infrastructure investment, and user fee policies.

- Promote safety and an improved throughput of marine traffic through the application of modern technologies, e.g., electronic charts, automated information systems, and VTS with the communication and digital updating of important information.

Management Systems: The management systems supporting the MTS will be a confederation of systems and processes to provide better information to decision makers. The management systems supporting the MTS will:

- Ensure that governing laws and regulations are periodically reviewed for their economic effect on trade and other sectors of the U.S. economy and their environmental effects.
- Involve several tiers (e.g., local, regional/State, and national). Participation at each tier will be open to both private and public stakeholders and allow comprehensive consideration of all interests. An established structure will facilitate communications between tiers, allowing issues to be raised at the appropriate level for quick resolution through dialog and negotiations among all stakeholders.
- Be forward-looking to allow stakeholders at all levels to make timely decisions on policy, investment, and research and development to provide for a world-class, technically advanced MTS.
- Be agile enough for timely decision making on short-term national emergency issues while maintaining long-range objectives.
- Be forward-looking to allow timely decisions on policy, investment, and research and development to provide for a world-class, technically advanced MTS.
- Provide the mechanism for systematic planning with other transportation modes for national defense requirements and emergency operations.
- Provide for a capable and educated work force.

MTS Systemwide Attributes

The physical characteristics, functions, and support systems of the U.S. marine transportation system, as envisioned, address many of the critical issues identified in Chapter IV, particularly in the areas of competitiveness and infrastructure. Additional system attributes in the areas of the environment, security, and safety, necessary in the MTS, address the critical issues in these areas.

Safety: Safe operations result in increased efficiency of the marine transportation system, protecting life, property, and the environment. Safety will continue to be a high priority of all stakeholders and system users. Safety attributes of the U.S. MTS will include:

- Encouraging compliance with standards for personnel qualifications and for design, construction, operation, and maintenance of vessels, infrastructure, and equipment.
- Evaluating and updating safety standards on an ongoing basis to ensure that the standards remain relevant to changing equipment and operations of a continually evolving transportation system.
- Ensuring the appropriate skills, training, and experience for all individuals engaged in commerce and recreational activity in the MTS.
- Establishing well-developed and exercised safety and contingency plans to prevent and respond to incidents.

- Supporting the creative use of technology and information that contributes to safe operations in a full range of geographic, geospatial, and environmental conditions.
- Collecting, analyzing, and disseminating information about marine casualties, near-miss incidents, and other lessons learned.
- Being leaders in raising international safety standards.
- Sponsoring forums to provide greater access to marine safety expertise and resources.
- Making the necessary investments in safety to meet or exceed the anticipated increased risks resulting from emerging technologies and changes in operations.

Security: The MTS must support National security efforts to ensure quick, secure, and efficient support of all types of military operations. It must also support deployment of nonintrusive inspection technology and continued law enforcement efforts to detect and prevent movement of contraband, theft, illegal immigration, and other criminal or terrorist activities, as well as quick and efficient response to disasters.

The security attributes of the U.S. marine transportation system will include:

- Designing and operating critical infrastructure in a manner that detects, prevents and/or mitigates system disruptions that result from natural and manmade disasters.
- Restoring, as quickly as possible, MTS services disrupted by natural or man-made disasters.
- Ensuring uninterrupted capability to deploy forces and materiel in support of national security operations.
- Improving transparency of the system to facilitate tracking of maritime cargo and personnel transportation operations, which support detection and deterrence of smuggling, cargo theft, tariff evasion, terrorism, and other potential acts of violence.
- Fostering cooperation among law enforcement and other appropriate authorities to maximize timely sharing of intelligence information via electronic exchange on potential smuggling and terrorist activities.
- Development of uniform security standards and security measures in all aspects of MTS design and operations so as to reduce MTS vulnerability, deter illegal activity, protect the public, and minimize impact to the user. Security requirements will be balanced upon the threat and the requirements of cost-effective operations.
- Emphasizing the criticality of national security in commercial port improvements and maintenance that improve the capability to deploy and sustain military forces, when required.
- Ensuring that adequate U.S. shipbuilding and repair capacity is available to support national security needs.
- Ensuring that adequate U.S.-flag shipping and crews are available for materiel movement in all threat conditions.

The Environment: All maritime interests, as users and stewards of the Nation's waterways, will implement sustainable practices that protect, enhance, and further the restoration of marine resources while meeting the Nation's transportation needs. Environmental protection will be consistently incorporated into all aspects of maritime activities and decision making.

To achieve this vision, concerted and coordinated efforts must ensure that the MTS is:

- Guided by policies that safeguard environmental concerns and are fully integrated throughout the planning process to support development and environmental goals.
- Designed and operated to preserve and enhance the Nation's natural resources while ensuring that large volumes and varieties of cargo and passengers can be efficiently transported over the waterways while ensuring environmental protection.
- Guided by efficient and effective environmental science, regulations, and policies.
- Staffed with a work force trained to understand and deal with environmental concerns and hazards.
- Supported by rapid, effective pollution response that is aided by optimal technology for monitoring and responding to environmental incidents.
- Overseen by uniform compliance/enforcement of all air and water standards at local, State, and Federal levels.
- Managed by a comprehensive process that includes planning and permitting for dredging and disposal of dredged material that protects and enhances the environment while allowing for efficient, effective, and timely channel development and maintenance.
- Supported fully through the development of partnerships with all stakeholders including public education and outreach programs.
- Cognizant of the environmental effects of ports, waterway operations, and intermodal connections that extend beyond local ecosystems.
- Designed and operated in a manner that protects and preserves the regional economic viability of the natural resources, including fisheries and tourism.
- Designed to anticipate and avoid, as well as mitigate, where unavoidable, negative environmental impacts of channel development and maintenance during the decision-making process concerning these projects.
- Guided by comprehensive planning efforts in ports and harbor development, including dredging of channels, that use a holistic watershed approach that includes all stakeholders to ensure timely and effective economic development while meeting environmental protection and enhancement goals.
- Managed by a process that views dredging and dredged material disposal in the larger context of sediment management. Dredged material should be considered a resource for beneficial use projects.